

### **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

1. (Previously amended) A gas chromatograph, comprising:
  - a column to separate components of a fluid sample in a fluid stream;
  - a valve switch connected upstream of said column, said valve switch also being connected downstream of a sample source, and downstream of a carrier gas source;
  - a backpressure restrictor, upstream of said column, that has an input side and an output side, said backpressure restrictor being suitable to maintain a ratio for a fluid pressure on said output side to a fluid pressure on said input side of less than or equal to about 0.528;
  - a first heater for heating said column to a first desired temperature;
  - a second heater for heating a carrier gas stream from said carrier gas source to a second desired temperature,
  - wherein said second desired temperature is about five to ten degrees Celsius higher than said first desired temperature.
2. (cancelled)
3. (original) The gas chromatograph of claim 21, wherein said back pressure restrictor is capillary tubing.
4. (original) The gas chromatograph of claim 1, wherein said back pressure restrictor is upstream of said valve switch and downstream of said carrier gas stream.
5. (original) The gas chromatograph of claim 4, wherein said back pressure restrictor is capillary tubing.

6. (Previously Amended) A gas chromatograph, comprising:
  - a column to separate components of a fluid sample in a fluid stream;
  - a valve switch connected upstream of said column, said valve switch also being connected downstream of a sample source, and downstream of a carrier gas source;
  - a backpressure restrictor, upstream of said column, that has an input side and an output side, said backpressure restrictor being suitable to maintain a ratio for a fluid pressure on said output side to a fluid pressure on said input side of less than or equal to about 0.528;
  - a first heater for heating said column to a first desired temperature;
  - a second heater for heating a carrier gas stream from said carrier gas source to a second desired temperature,wherein said second temperature is at least 5 degrees Celsius above said first temperature.
7. (original) The gas chromatograph of claim 1, further comprising:
  - means for cooling said carrier gas stream to a third desired temperature.
8. (original) The gas chromatograph of claim 1, further comprising a housing surrounding said second heater.
9. (original) The gas chromatograph of claim 8, wherein said gas chromatograph further includes in said housing a means for cooling said carrier gas stream.
10. (original) The gas chromatograph of claim 1, wherein second heater heats said carrier gas stream to a series of predetermined temperatures according to a temperature program.
11. (previously presented) The gas chromatograph of claim 1, further comprising:
  - an effective back pressure restrictor upstream of said column.
12. (previously presented) The gas chromatograph of claim 1, further comprising:

an effective back pressure resistor upstream of said valve switch.

13. Canceled.
14. (Currently amended) The gas chromatograph of claim 1, further comprising:  
a second back pressure restrictor downstream of said column.
15. (Previously presented) The gas chromatograph of claim 14, further comprising:  
an effective back pressure restrictor upstream of said column.
16. (Previously presented) The gas chromatograph of claim 14, further comprising:  
an effective back pressure restrictor upstream of said valve switch.
17. (Previously presented) The gas chromatograph of claim 1, further comprising:  
at least a second valve switch;  
a back pressure restrictor upstream of all valve switches in said gas chromatograph.
- 18-26. Cancelled.